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10/725,182	12/01/2003	Marina Azizova	70-098	2040
27106	7590	12/13/2007	EXAMINER	
MELVIN I. STOLTZ, ESQ. 51 CHERRY STREET MILFORD, CT 06460			VENKAT, JYOTHSNA A	
			ART UNIT	PAPER NUMBER
			1615	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/725,182

Applicant(s)

AZIZOVA ET AL.

Examiner

JYOTHSNA A. VENKAT Ph. D

Art Unit

1615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Receipt is acknowledged of amendment and remarks filed on 10/25/07. Claim 6 has been canceled as per applicant's amendment dated 10/25/07. Claims 1-5 and 7 are pending in the application and the status of the application is as follows:

The following new ground of rejection is necessitated by the amendment.

#### *Claim Rejections - 35 USC § 112*

Claims 1-5 and 7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. **This is new matter rejection.**

There is no support in the specification for amended claim 1, which recites that hair styling gel and conditioning gel “comprising shear thickening properties enabling the viscosity of the gel to increase with an increasing shear rate” comprising components A, B and C.

In accordance with MPEP 714.02, applicants should specifically point out support for any amendments made to the disclosure.

Claims 3-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. **This is new matter rejection.**

There is no support in the specification for the expression "polyvinyl pyrrolidone". To obviate the 112, first paragraph rejection, claim 4 was amended to recite "polyvinylpyrrolidone".

Applicants in the response dated 10/25/07 point out that use of the term vinyl pyrrolidone polymer is clearly understood by those having ordinary skill in this art to specifically refer to "PVP" or "polyvinyl pyrrolidone" and as a result, the term "polyvinyl pyrrolidone" has been added to Claim 4 as a known equivalent to the term "vinyl pyrrolidone polymer".

In response to the above argument, there is no description in the specification for "vinylpyrrolidone polymer". Vinylpyrrolidone polymer can be homopolymers of vinylpyrrolidone or copolymers of vinyl pyrrolidone. There is no description in the specification for vinyl pyrrolidone. Vinyl polymer is not clearly understood by those having ordinary skill in the art to specifically refer to "PVP" or "polyvinyl pyrrolidone". See U. S. Patents 6,346, 600 and 6,829, 843. See patent '600 at col.2, line 34 to col.3, line, which substantiates examiners position.

DETAILED DESCRIPTION OF THE  
INVENTION

Hereinafter, a detailed description is given about a mode for carrying out the present invention.

The vinylpyrrolidone polymer in the present invention is, specifically, poly(vinylpyrrolidone) and/or a vinylpyrrolidone copolymer.

The poly(vinylpyrrolidone) is a compound of general formula (3) below:



(wherein n is an integer) and is obtained by polymerizing vinylpyrrolidone by any method as mentioned below.

The vinylpyrrolidone copolymer is a copolymer of which the constituents include vinylpyrrolidone and a comonomer copolymerizable therewith. The comonomer to be copolymerized with vinylpyrrolidone is not especially limited, but specific examples thereof include: 1) (meth)acrylate esters such as methyl (meth)acrylate, ethyl (meth)acrylate, butyl (meth)acrylate, cyclohexyl (meth)acrylate, and hydroxyethyl (meth)acrylate; 2) (meth)acrylamide and derivatives therefrom such as N-monomethyl(meth)acrylamide, N-monoethyl(meth)acrylamide, and N,N-dimethyl(meth)acrylamide; 3) basic unsaturated monomers such as dimethylaminoethyl (meth)acrylate, dimethylaminomethyl(meth)acrylamide, vinylpyridine, and vinylimidazole and their salts or quaternized products; 4) vinylamides such as vinylformamide, vinylacetamide, and vinylloxazolidone; 5) carboxyl-group-containing unsaturated monomers such as

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(meth)acrylic acid, itaconic acid, maleic acid, and fumaric acid; 6) unsaturated anhydrides such as maleic anhydride and itaconic anhydride; 7) vinyl esters such as vinyl acetate and vinyl propionate; 8) vinylethylene carbonate and derivatives therefrom; 9) styrene and derivatives therefrom; 10) 2-sulfioethyl (meth)acrylate and derivatives therefrom; 11) vinylsulfonic acid and derivatives therefrom; 12) vinyl ethers such as methyl vinyl ether, ethyl vinyl ether, and butyl vinyl ether; and 13) olefins such as ethylene, propylene, octene, and butadiene. Among these groups of comonomers, particularly, groups 1)-8) are favorable, for example, in respect to the copolymerizability with vinylpyrrolidone. As to the above comonomers, only one kind may be copolymerized with vinylpyrrolidone, or any mixture of two or more kinds of comonomers may be copolymerized with vinylpyrrolidone.

See also U. S. Patent 6,829, 843 at col.2, ll 1-38, which teaches that

vinylpyrrolidone polymer can be a homopolymer or copolymer at col.2, ll

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DETAILED DESCRIPTION

In the present invention, vinylpyrrolidone polymer powder is prepared by spraying an aqueous solution of a vinylpyrrolidone polymer into a drying tower using a disc atomizer and then drying.

Herein, vinylpyrrolidone refers to the usual N-vinyl-2-pyrrolidone. Vinylpyrrolidone polymer includes a homopolymer of vinylpyrrolidone and a copolymer of vinylpyrrolidone and another monomer (copolymer preferably containing at least 20% by weight (hereinafter referred to as %), more preferably at least 30%, of vinylpyrrolidone units).

Examples of the other monomer are acrylic acid, methacrylic acid, alkylester of acrylic acid (for example methyl acrylate and ethyl acrylate), alkylester of methacrylic acid (for example methyl methacrylate and ethyl methacrylate), aminoalkylester of acrylic acid (for example diethylaminoethyl acrylate), aminoalkylester of methacrylic acid, monoester of acrylic acid and glycol, monoester of methacrylic acid and glycol (for example hydroxyethyl methacrylate), alkali metal salt of acrylic acid, alkali metal salt of methacrylic acid, ammonium salt of acrylic acid, ammonium salt of methacrylic acid, quaternary ammonium derivative of aminoalkylester of acrylic acid, quaternary ammonium derivative of aminoalkylester of methacrylic acid, quaternary ammonium compound of diethylaminoethyl acrylate and methylsulfate, vinyl methyl ether, vinyl ethyl ether, alkali metal salt of vinyl sulfonic acid, ammonium salt of vinyl sulfonic acid, styrene sulfonic acid, styrene sulfonate, allylsulfonic acid, allylsulfonate, methallylsulfonic acid, methallylsulfonate, vinyl acetate, vinyl stearate, N-vinylimidazole, N-vinylacetamide, N-vinylformamide, N-vinylcaprolactam, N-vinylcarbazole, acrylamide, methacrylamide, N-alkylacrylamide, N-methylacrylamide, N,N-methylene bisacrylamide, glycol diacrylate, glycol dimethacrylate, divinylbenzene and glycol diallyl ether.

Therefore amending claim 4 to "polyvinyl pyrrolidone" is new matter.

The following rejections are maintained for reasons of record.

*Claim Rejections - 35 USC § 112*

Claims 2 and 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. **This is written description.**

This is a "written description" rejection, rather than an enablement rejection under 35 U.S.C. 112, first paragraph. *Vas-Cath Inc. V. Mahurka*, 19 USPQ2d 1111, states that applicant

must convey with reasonable clarity to those skilled in the art that, as of the filing date sought; he or she was in possession of the invention. The invention, for purposes of the “written description” inquiry is “*whatever is now claimed*” (see page 1117).

The description requirement of the patent statute requires a description of an invention, not an indication of a result that one might achieve if one made that invention. See *In re Wilder*, 736 F.2d 1516, 1521, 222 USPQ 369, 372-73 (Fed. Cir. 1984). Applicant fails to adequately describe, hair styling polymer, wherein the hair styling polymer is “vinylpyrrolidone polymer”. Specification also does not describe vinylpyrrolidone polymer. Are these polymers homopolymers or copolymers? Specification does not describe or exemplify one species belonging to this polymer.

The disclosure of a single disclosed species may provide an adequate written description of a genus when the species disclosed is representative of the genus. However, the present claim encompasses numerous species that are not further described. One of skill in the art would not recognize from the disclosure that the applicant was in possession of the genus drawn to “hair styling polymers, where in the hair styling polymer is “vinyl pyrrolidone polymer””.

The description requirement of the patent statute requires a description of an invention, not an indication of a result that one might achieve if one made that invention. See *In re Wilder* 736 F.2d 1516, 1521, 222 USPQ 369, 372-373 (Fed. Cir. 1984). Accordingly, it is deemed that the specification fails to provide adequate written description for the genus “vinyl pyrrolidone polymers” and does not reasonably convey to one skilled in the relevant art the inventor(s), at the time the application was filed has possession of the entire scope of the invention drawn to “vinyl pyrrolidone polymers”.

***Response to Arguments***

Applicant's arguments filed 10/25/07 have been fully considered but they are not persuasive.

*J* Applicant ~~is~~ argue at page 11:

Furthermore, in regard to the Examiner's objections to the terms "vinyl pyrrolidone polymer" and "vinyl pyrrolidone terpolymer", the Applicants have amended Claim 4 to specifically define the component intended by the present disclosure. In this regard, the Applicants use of the term vinyl pyrrolidone polymer is clearly understood by those having ordinary skill in this art to specifically refer to "PVP" or "polyvinyl pyrrolidone". As a result, the term "polyvinyl pyrrolidone" has been added to Claim 4 as a known equivalent to the term "vinyl pyrrolidone polymer."

In response, there is no description in the specification for "vinyl pyrrolidone polymer" "being PVP or polyvinyl pyrrolidone and this term is not understood by one of ordinary skill in the art to be PVP. Specification fails to define the scope for "vinyl pyrrolidone polymer" since this term can be homopolymer ( PVP) or copolymer, in which case one monomer is vinyl pyrrolidone and the other monomer can be acrylate esters or acrylic acids or vinyl esters or vinyl amides. These are just a few monomers. Therefore claims do not comply with written description requirement. See above for new matter rejection regarding "PVP".



Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "vinylpyrrolidone polymers" is without metes and bounds. Recourse to the specification does not define the scope of this expression.

### ***Response to Arguments***

Applicant's arguments filed 10/25/07 have been fully considered but they are not persuasive.

Applicant argues that the claims have been amended since the use of the term vinyl pyrrolidone polymer is clearly understood by those having ordinary skill in this art to specifically refer to "PVP" or "polyvinyl pyrrolidone".

There is no description in the specification for "vinyl pyrrolidone" polymer and a person of ordinary skill in the art could not interpret the metes and bounds of claim so as to avoid infringement.

### ***Claim Rejections - 35 USC § 103***

Claims 1-4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of U. S. Patent 6,297, 203 ('2030 and AKZO NOBEL Technical Bulletin (6/2002).

Patent '203 teaches hair styling compositions. See the abstract, see col.5, lines 53-54 for the preferred zwitterionic surfactant, which is claimed Cocoamidopropyl betaine, see col.1, lines 60-65 for the concentration of the surfactant, see col.8, ll 35 through col.9, lines 17 for the hair styling polymers, see col.9, lines 30-35 for claimed perfumes and preservatives. Patent at col.9, lines 46-60 suggests adding thickening agent. See also examples, for the claimed

ingredient B, hair styling polymer Luviquat, fragrance and thickeners. The difference between the patent and the instant application is patent does not teach ingredient (A) claimed and also hydrogen peroxide. However the technical bulletin specifically teaches (A) along with hydrogen peroxide. See page 1, wherein the bulletin teaches ingredient A as a thickener in hair care formulations and teaches that this ingredient provides conditioning properties. The bulletin also teaches that the thickening effect can be boosted by adding synergist like perfume oils. See page 2, for the combination of ingredient A and hydrogen peroxide.

Accordingly, it would be obvious to one of ordinary skill in the art at the time the invention was made to modify the compositions of patent '203 and add the ingredient A and hydrogen peroxide expecting beneficial effect to hair. One of ordinary skill in the art would be motivated to add the ingredient A and hydrogen peroxide with the reasonable expectation of success that the ingredient A is a thickener which provides clear solutions and also provide conditioning properties to the compositions, which is beneficial to the consumer. This is a prima facie case of obviousness.

### ***Response to Arguments***

Applicant's arguments filed 10/25/07 have been fully considered but they are not persuasive.

Applicant argues:

“First of all, patent '203 teaches a styling shampoo incorporating a plurality of ingredients. The Examiner, without comment and without any realistic basis, has selected one of the numerous ingredients from the teaching of this prior art reference for being combined with a totally different and unrelated ingredient, which is not in any way

equivalent to the compounds defined in the cited patent. Furthermore, there is no teaching or suggestion in the cited patent or in the cited Technical Bulletin which would lead one having ordinary skill in the art to combine the two components as asserted by the Examiner and, in addition, no suggestion regarding the quantity of each material to employ." See page 9 of remarks.

In response patent '203 teaches styling compositions and at col.5, ll 25-54 teaches amphoteric surfactants in to the compositions and at lines 53-55 teaches the preferred surfactant, which is Cocoamidopropyl betaine. See below for teaching at col.5.

Zwitterionic surfactants suitable for use in the styling shampoo composition are well known in the art. Preferably the zwitterionic surfactants are used in combination with the anionic surfactants described herein, and include those surfactants broadly described as derivatives of aliphatic quaternary ammonium, phosphonium, and sulfonium compounds, in which the aliphatic radicals can be straight or branched chain, and wherein one of the aliphatic substituents contains from about 8 to about 18 carbon atoms and one contains an anionic group such as carboxy, sulfonate, sulfate, phosphate or phosphonate. Nonlimiting examples of suitable zwitterionic surfactants are the betaines including the high alkyl betaines, such as coco dimethyl carboxymethyl betaine, cocoamidopropyl betaine, cocobetaine, lauryl amidopropyl betaine, oleyl betaine, lauryl dimethyl carboxymethyl betaine, lauryl dimethyl alpha-carboxyethyl betaine, cetyl dimethyl carboxymethyl betaine, lauryl bis-(2-hydroxyethyl) carboxymethyl betaine, stearyl bis-(2-hydroxypropyl) carboxymethyl betaine, oleyl dimethyl gamma-carboxypropyl betaine, and lauryl bis-(2-hydroxypropyl)alpha-carboxyethyl betaine. The sulfobetaines may be represented by coco dimethyl sulfopropyl betaine, stearyl dimethyl sulfopropyl betaine, lauryl dimethyl sulfoethyl betaine, lauryl bis-(2-hydroxyethyl) sulfopropyl betaine and the like; amidobetaines and amidosulfobetaines, wherein the  $RCONH(CH_2)_3$  radical is attached to the nitrogen atom of the betaine are also useful in this invention. Most preferred for use herein is cocoamidopropyl betaine.

Instant application is claiming the same cocoamidopropyl betaine and the range of this surfactant claimed is about 3-30%. Patent at paragraph bridging col.s 2-3 teaches the range of the surfactant. See below.

Suitable anionic surfactants for use in the styling shampoo composition herein include those which are known for use in hair care or other personal care cleansing compositions. The concentration of the anionic surfactant in the styling shampoo composition should be sufficient to provide the

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desired cleaning and lather performance, and generally ranges from about 5% to about 50%, preferably from about 6% to about 30%, more preferably from about 7% to about 25%, even more preferably from about 8% to about 18%, by weight of the composition.

The claimed range of the surfactant is within the range taught by the patent.

Patent at col.17, ll 1-11 teaches that suspending agents or thickeners or viscosity modifiers can be used which impart gel-like viscosity to the compositions. See below.

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Other suitable suspending agents may be used in the styling shampoo compositions, including those that can impart a gel-like viscosity to the composition, such as water soluble or colloiddally water soluble polymers like cellulose ethers (e.g., methylcellulose, hydroxybutyl methylcellulose, hydroxypropylcellulose, hydroxypropyl methylcellulose, hydroxyethyl ethylcellulose and hydroxyethylcellulose), guar gum, polyvinyl alcohol, polyvinyl pyrrolidone, hydroxypropyl guar gum, starch and starch derivatives, and other thickeners, viscosity modifiers, gelling agents, etc. Mixtures of these materials can also be used.

AKZO NOBEL product brochure teaches that ELFACOS T 212 is a thickener.

The brochure also teaches at page 2 that high viscous formulations are formed using ingredient 1 claimed along with hydrogen peroxide and anionic surfactant. The expression "comprising" in the claims is inclusive of all unrecited ingredients.

Applicant also argues

"Furthermore, and of most significance, is the fact that the Applicants have discovered that the combination of these two ingredients provide a hairstyling and conditioning gel which comprises a unique, unobvious and

unanticipated physical property. This unique attribute is the shear thickening property which enables the viscosity of the gel to increase with an increasing shear rate. The references cited by the Examiner, as well as any other existing reference found in the art, fail to teach or suggest the achievement of this unique physical property from the combination of the two specific ingredients defined in Claim 1.”

In response the expression” shear thickening property which enables the viscosity of the gel to increase with an increasing shear rate” is new matter.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTHSNA A. VENKAT Ph. D whose telephone number is

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571-272-0607. The examiner can normally be reached on Monday-Friday, 10:30-7:30:1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MICHAEL WOODWARD can be reached on 571-272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/JYOTHSNA A. VENKAT/ Ph. D**  
**Primary Examiner**  
**Art Unit 1615**

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